**ISM6427C**

**1/09:**

* AI: ANI, AGI, ASI
* Machine learning (ML): emulates learning capabilities of humans
* DL (deep learning)
* Gen AI is a type of deep learning. Machines can emulate short term memory
* Data scientists realm is business + AI, ML, DL, …
* Artificial Narrow Intelligence (ANI): AI that can do one thing and do that really well. Example: driving a car, spell check, etc. ANI was the only AI that existed until around 2020.
  + Supervised ANI: predictive analytics. Identify trends in data. Ex: SKlearn
  + Unsupervised ANI: prescriptive analytics. Changing variables to get certain results
* AGI (artificial general intelligence): machines can emulate human cognitive capabilities.
* ASI (Artificial Superintelligence): AI creates new AI, improve AI, write code to improve itself, remove humans from the loop. ASI is smarter than humans
* AI transforms 1 dataset into another dataset (input -> output) A to B mapping
* Finding patterns in the data
* Neural network. 1 Neuron finds 1 pattern in the data. Neurons always get all the data and then choose 1 pattern of the data to use
* The neural network learns on its own to find the pattern in the data and what patterns contribute how to the prediction of the yield
* Theory of mind: Ability to understand thoughts and feelings of others. GPT models are good at understanding our thoughts
* Alignment: not only building AI that follows instructions but also creating an AI that aligns with human values and ethics

**1/16:**

* *General AI*: AI that can do anything a human can do
* ASI: AI that builds on itself to improve
* The rise of AI is largely due to machine learning. Historical data is necessary for machine learning
* Data is what makes AI work really well
* Google Tag Manager 99 uses. <https://www.analyticsmania.com/post/google-tag-manager-use-cases/>
* Data Science: Science of extracting knowledge and insights from data
* Machine Learning: Field of study that gives computers the ability to learn without being explicitly programmed